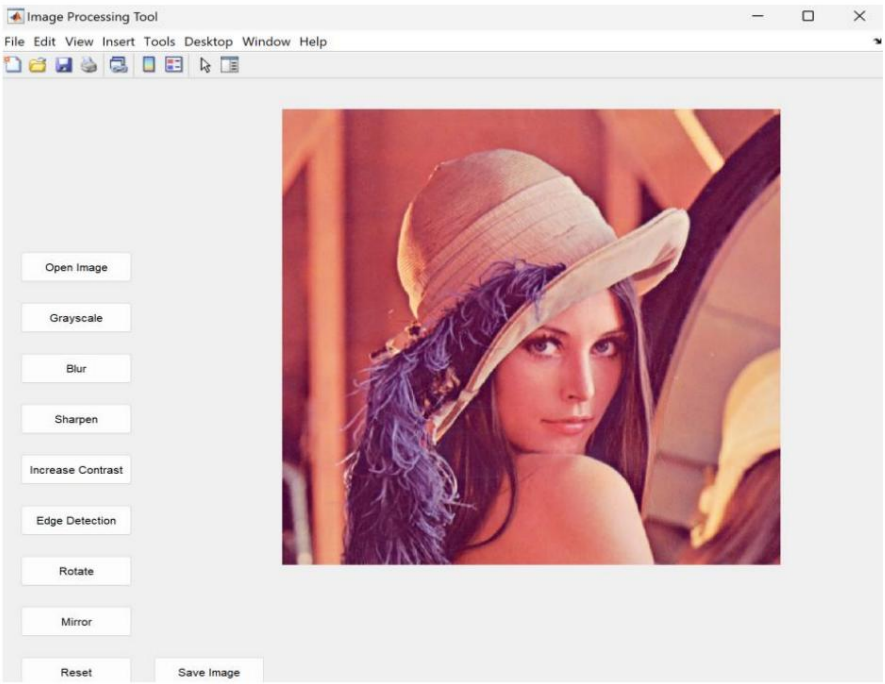
Computer vision basics course

Lecturer: Dr. Turkzadeh, second semester 1402-1403

The second project: building an image processing tool

The purpose of this project is to implement different methods of image processing in the form of a user interface in MATLAB. The purpose of the image processing tool is to create a user interface with different options for performing image processing in MATLAB, and in which by selecting one of the options can receive an image and display the user interface environment of the image, and by selecting other options in There is a user interface on which to perform image processing.

For example, the following image is a user interface for image processing:



Options that should be in your user interface:

1: Open an image: 2: Convert the image to Grayscale

3: Blurring the image: 4: Sharpening the image: 5: Increasing the contrast of the image

6: Edge detection (by selecting this option, a list will open where you can select one of the Sobel or Canny methods selected for edge detection.

7: Finding image features) By selecting this option, a list will open where you can choose one of the methods chose Harris or SIFT to find image features.

8: Rotate the image by 90 degrees: 9:

Reverse the image: 10:

Reset the image to restore the original image

:11 Save the image

Important points:

1: All steps must be implemented in MATLAB and be as follows:

The code is written in the form of a zip file named

CV_BA_Project2_name family.zip

2: The code sent by you should not require any changes by the proofreader, and by executing it, the user interface should be created and all the options defined for the user interface should be done correctly. Make sure that your user interface must be free of any errors and no errors will be received by doing anything on the image.